

Two-Staged Mixed Plug Flow Anaerobic Digesters



Digester Projects Developed 2001 - 2008



DAIRY DIGESTER PROJECTS

- 137,900 WCE
- 65 Digesters
- 45 Dairies (750 – 15,000 WCE)
- 13 States
- 37.9 MW Electricity

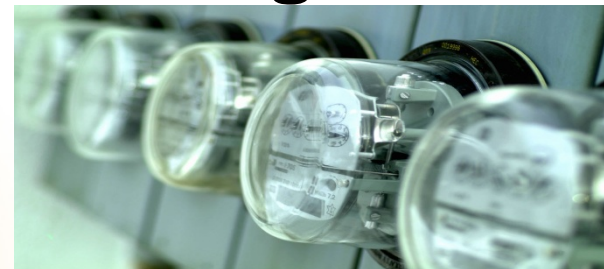


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- **POSITIVE TRENDS FOR DEVELOPING PROJECTS**
 - **CHALLENGES WITH DEVELOPING PROJECTS**
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POSITIVE TRENDS

- **Revenue Streams Are Increasing**

Power Rates Are Increasing in Real Dollars



Carbon Credit Markets Are Developing Internationally

Renewable Energy Credits Are Being Sought By
Utilities



New Fiber Markets Are Developing



POSITIVE TRENDS

- Revenue Streams Are Increasing
 - **High Efficiency Biogas Engines Available In Variety of Sizes**
 - **Significant Interest By Dairy Industry In Digesters Nationally**
 - **Investment Community Increasingly Views Digesters As Good Investments**
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CHALLENGES

- **Financial Climate**
 - **Regulatory Environment in Some States**
 - **Utility Interconnect Process Taking More Elapsed Time**
 - **Staying On Top Of Preventive Maintenance**
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George DeRuyter & Sons Dairy

"Providing Sustainable Energy For Yakima County"

BIOGAS ANAEROBIC MANURE DIGESTER

CONSTRUCTION & MANAGEMENT
PROVIDED BY:




PATENTED ENGINEERING & DESIGN
PROVIDED BY:



Image Courtesy of USGS/ Cascades Volcano Observatory



George DeRuyter & Sons Dairy **Anaerobic Digester**

- Project Statistics
 - Located Near Sunnyside, WA
 - Designed for 4,300 cows
 - Actual WCE 4050
 - Construction Started in March 2006
 - Construction Completed October 2006
 - First Power Generated November 2006
 - Generation Capacity 1200 kW/h
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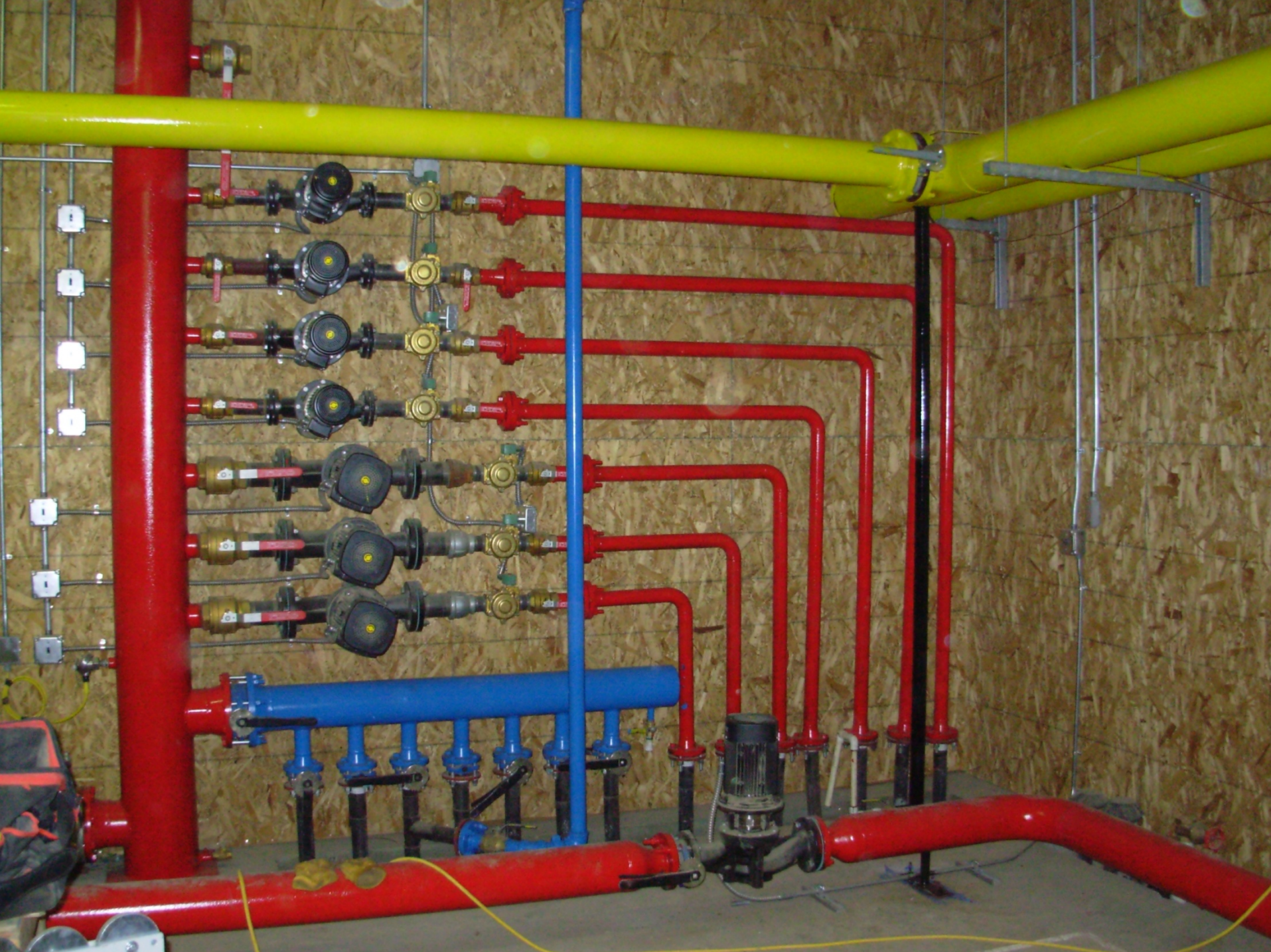




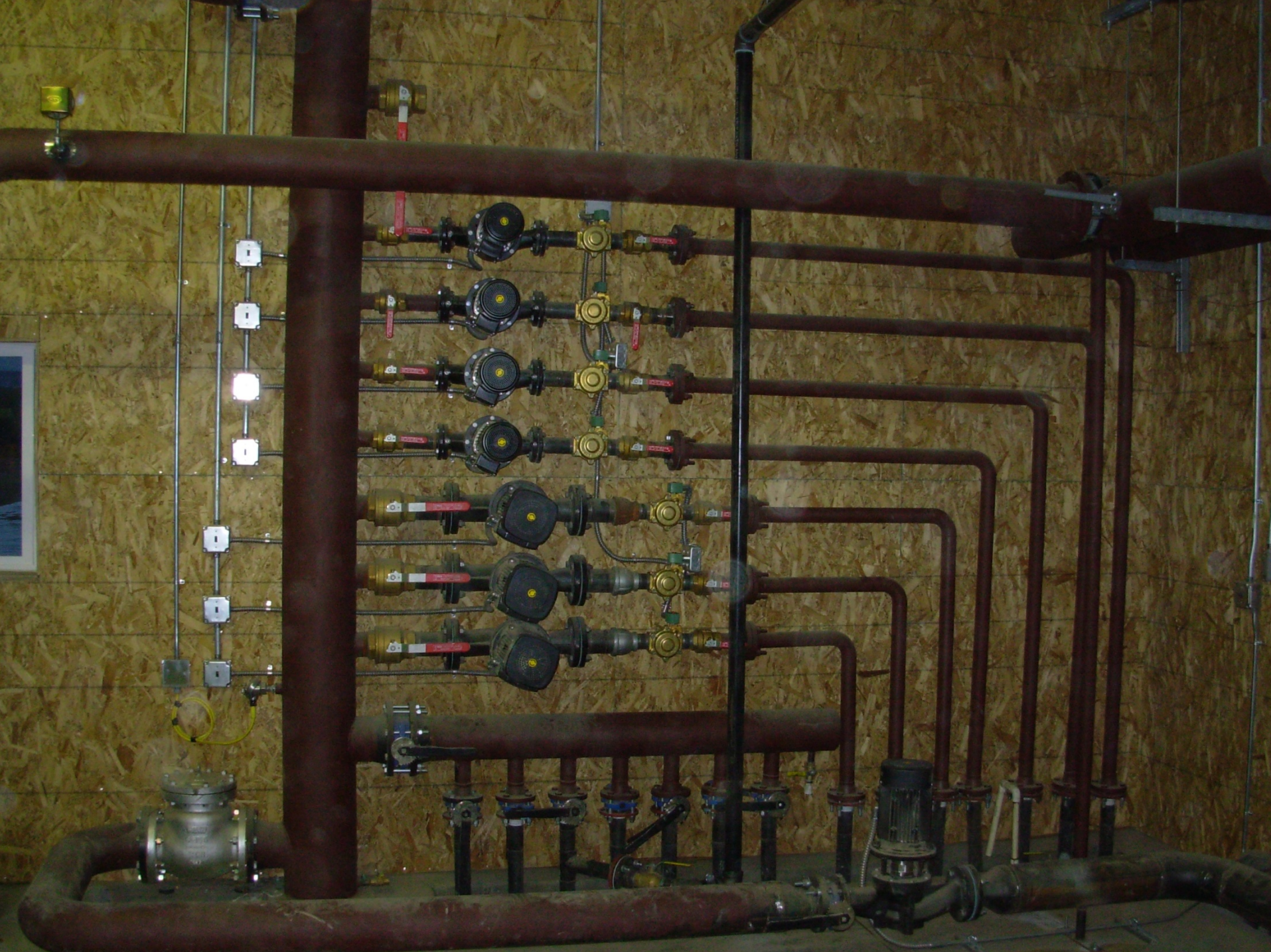


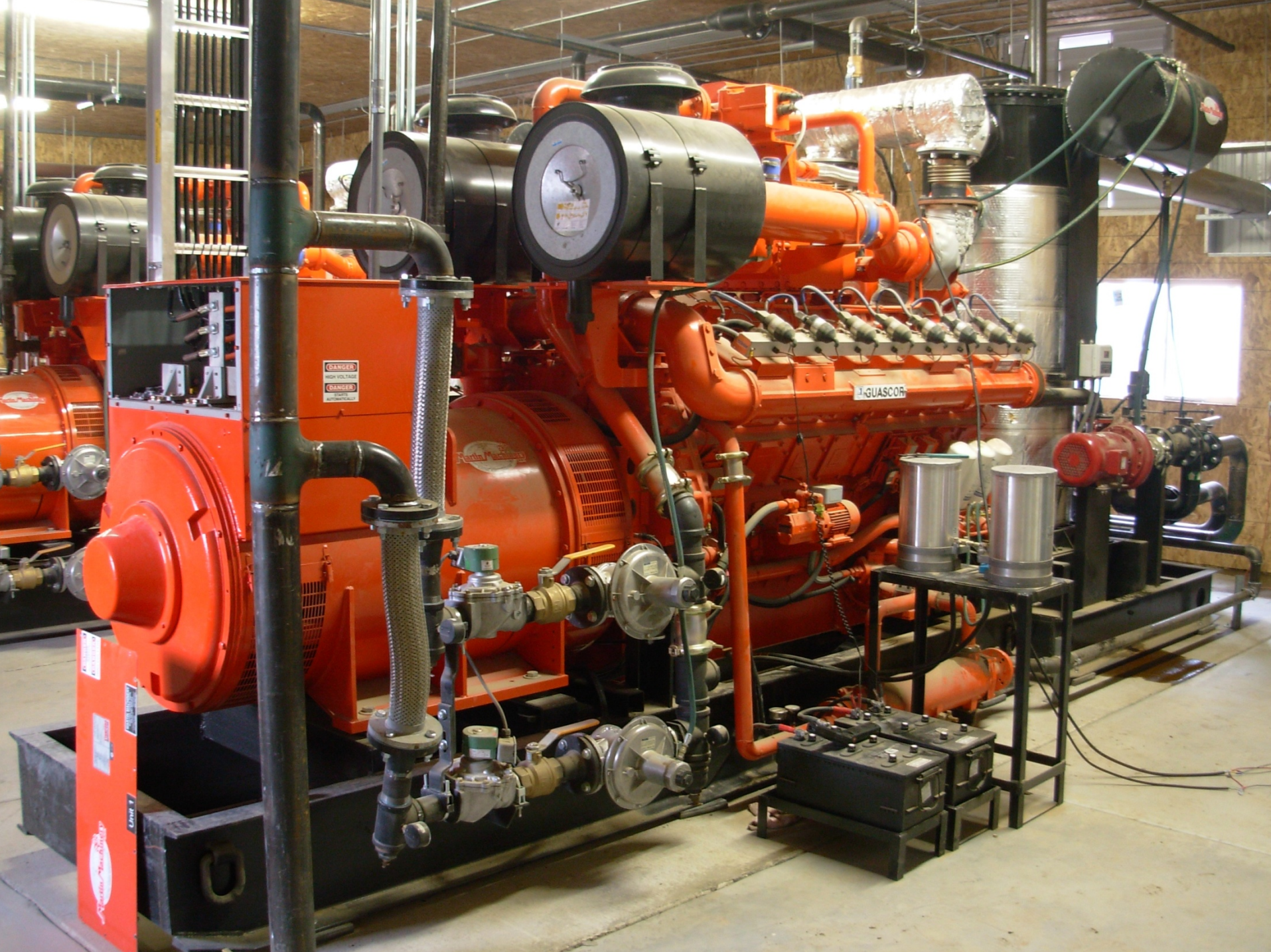












Unit 1

Unit 2

W.T. & C. Collier-Hammar
Power Line Co.
Cable Services

